

### REMARKS

This amendment is responsive to the Final Office Action dated January 25, 2007. Applicant has amended claims 1, 11 and 13, which are pending. Claims 21 – 26 are new. All other previous claims are cancelled.

### Claim Rejection Under 35 U.S.C. § 103

In the Final Office Action, the Examiner rejected claims 1,4,6,8,11,13-14, 17 and 19 under 35 U.S.C. 103(a) as being unpatentable over Best (US 5,358,259) in view of Breese et al. (US 5,987,415). Applicant respectfully traverses the rejection [to the extent such rejections may be considered applicable to the claims as amended]. The applied references fail to disclose or suggest the inventions defined by Applicant's claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

#### **Applicant has amended claims to define patentably over Best and Breese.**

Applicant has amended Claims 1, 11 and 13 to specify more narrowly how the system administrator uses the situation tags and character tags along with tag types to prepare conversational text that can be inserted with contextual accuracy into multiple behavior patterns, thus reducing production time compared to traditional production methods. Applicant has added dependent claims 21, 22 and 23 to specify in greater detail (including references to specification drawings) how the system administrator uses the situation tags and the character tags along with the tag types to prepare conversational text to be inserted with contextual accuracy into multiple behavior patterns, thus reducing production time compared to traditional production methods. Applicant has added dependent claims 24, 25 and 26 to state that the text-based dialogue could be delivered to the user via other media.

#### **Rejection In Light Of Best Overcome By Amended Claims**

The following is a review and discussion of the Applicant's embodiments. Although other inventors have envisioned branching, interactive conversational games, no one has developed a method for creating these games cost-effectively. The Applicant's embodiments drastically reduce the time required to create such games, using the following methods.

The system administrator creates behavior patterns, which are branching, fixed conversational paths along which the user will travel. The system administrator leaves "blanks" to be filled in by the situation tags and character tags, which are written separately. Because the system administrator creates his own names (tag types) for these tags, he knows their function in the behavior patterns and how they will fit into the behavior patterns. The "unexpected result" of this method is that the system administrator can quickly generate content for insertion into the existing behavior patterns in a contextually-accurate manner.

The savings in production time, as realized by the Applicant's company since the Applicant's original application, are disproportionate and unexpected. Traditional production methods for creating a branching conversation with about 200 pages require a minimum of about 100 hours. A system administrator using the applicant's embodiments can build a similar-sized branching conversation in about 60 hours. After the behavior patterns are created, only about 10 hours are required to create new branching conversations. This is possible because, at this point, the system administrator merely has to create new situation tags and new character tags and insert them into existing behavior patterns.

In summary, using the Applicant's embodiments, new branching conversations of similar size can be created about 10 times faster than traditional production methods, and about 6 times faster than the time needed to create the behavior patterns themselves.

Regarding Claims 1, 11, and 13-14, the last Office Action. stated that Best envisioned a two-way conversation with a "branching story line", characters and situations with user choices. Applicant has narrowed the independent claims (1, 11, 13) by specifying three elements (tag types, tag content and contextually-accurate insertion) which reduce the production cost. Claim 14 is cancelled by the Applicant. Claims 1, 11 and 13 now recite novel methods over Best, and thus define patentably over this prior art.

Applicant respectfully requests reconsideration of the Examiner's position.

With the addition of the above-mentioned three elements to the claims, these claims are now unobvious to a person having ordinary skill in the art for the following reasons:

**Results Achieved by The Applicant's Embodiments Are Unexpected,  
Disproportionate and Superior**

In the time period since the original application was filed, the Applicant has achieved unexpected, disproportionate and superior results using the methods in these currently amended claims. See above discussion of reduced production costs.

#### **Applicant's Embodiments Solve A Problem That Others Had Assumed Insoluble**

Until the Applicant's embodiments, interactive writers and producers had assumed that the cost and complexity of branching, interactive conversations was too high to generate an acceptable return-on-investment. In contrast, motion-based video games have been created by many interactive producers because these games can follow a large number of possible paths by using a system of trajectories based on mathematical rules. Without any similar rules-based system to simplify production costs, however, interactive human conversations had proved too unattractive for anything more than limited, one-off experiments (such as the Martin/Williams dialogue generator cited in the Applicant's original application).

#### **Lack of Implementation of Best Shows Applicant's Embodiments Are Unobvious**

Best foresaw an intriguing new medium but lacked a system for implementing this vision cost-effectively. Thus Best's invention has been substantially ignored and unimplemented by the interactive industry.

#### **The Applicant's Embodiments Are Contrary To The Teachings Of Best**

Best teaches the use of pre-recorded audio and specifically recommends against the use of on-screen text (Col. 6, lines 3-8). Best's claim relies on "voice sound data" (Claim 1, Col. 10, lines 52-55). In addition, Best does not suggest that the high cost of audio production might be problematic. From the start, the Applicant recognized the cost problems of interactive conversations based on pre-recorded audio files, and thus in many embodiments, the Applicant has used text-based dialogue rather than pre-recorded audio dialogue.

#### **Applicant's Embodiments Solve A Different Problem Than Best**

Best aimed to create interactive conversations using pre-recorded audio files, which he specifically recommended as being more realistic. Since he never mentioned cost as problematic

to his goal, he presumably envisioned a higher-priced interactive product. By contrast, the Applicant set out to create interactive conversations with a much lower production cost by relying primarily on text-based dialogue. Therefore Best and the Applicant were solving two entirely different problems.

#### **Applicant Solved A Problem That Best Did Not Even Recognize**

Best never anticipated the expense and complication of generating branching interactive conversations. Nowhere in his specification, claims or other materials does Best make any warnings about these problems. Nor does Best suggest any system or method to ameliorate these problems.

#### **Best Lacks Any Suggestion Of Needed Modifications**

Since Best never anticipated or was concerned about the high production costs of branching dialogue, he never suggested the need for any method or system to reduce these costs.

#### **Inoperative References**

In light of the Applicant's new elements in the currently amended claims, Best's invention is inoperative. The embodiments of Best are unable to produce games with sufficient cost-effectiveness to generate an adequate return-on-investment.

#### **Since Best Was Never Implemented or Commercialized, It Is A "Paper Patent"**

Because the production costs of Best's embodiments were too high to generate an adequate return-on-investment, they were never substantially implemented or commercialized. Thus they should be considered as a "paper patent."

#### **Best's Invention Constitutes An "Ancient Suggestion"**

The embodiments of Best are old, never implemented and produced greatly inferior results from a cost-efficiency standpoint.

### **Rejections In Light Of Best And Breese Are Refuted By Current Amendments And Other Factors Of Unobviousness**

Regarding claims 1, 11 and 13-14 in light of Best and Breese, the last Office Action stated that Breese teaches behavior patterns with a consistent attitude that are used by a multitude of characters. The last O.A. also stated that since Breese teaches changing from a first behavior pattern to a second behavior pattern based on user-responsive variables, it is obvious that a person having ordinary skill in the art could combine these features of Breese with the dialogue of Best in order to make the computer-based interactions "more natural for a user and to provide a wider variety of tailored responses."

Applicant has changed these independent claims (1, 11, 13) by deleting elements which relate to changing from a first behavior pattern to a second behavior pattern based on user-responsive variables. Claim 14 is cancelled.

Applicant respectfully requests reconsideration of the Examiner's position.

With the deletion of the above-mentioned elements in independent claims 1, 11 and 13, as well as the addition of the three narrower elements described above, these claims are now unobvious for the following reasons:

### **Applicant's Embodiments Solve A Different Problem Than Breese**

Breese aimed to make a computer-based application that would respond intelligently to spontaneous, unpredictable user input. This is similar to a telephone device, where every conversation can unfold differently. By contrast, the Applicant's embodiments are more similar to a book or movie. They create a pre-produced, fixed-path product which is the same every time it is played. Even though the user can go down different paths, the paths themselves do not change. As currently amended, the Applicant's embodiments provide a method for creating these fixed-path, contextually-accurate conversations at a reduced production cost.

### **Breese Reference Is From Different Field Than The Applicant's**

Breese's embodiments employ a system of stochastic probabilities and predictive analysis to create rules for responding "on-the-fly" to spontaneous user input. In contrast, the Applicant's embodiments enable a system administrator to manage pre-written, fixed elements to make pre-

produced products. Though both are computer-based, Breese has predictive software while the Applicant has editing software.

### **Best and Breese Teach Away From The Suggested Combination**

Like the Applicant, Best's embodiments aim at creating pre-packaged, fixed-path products for entertainment and education. Best's embodiments have many possible paths, but the paths are always fixed. With Breese, on the other hand, the paths themselves constantly change, depending on the user's latest input. The fixed paths of Best teach away from the dynamically-changing paths of Breese.

### **Best and Breese Are Impossible To Combine Due To Path Construction Differences**

The fixed paths of Best cannot be combined with the dynamically-changing paths of Breese. See discussion above.

### **Best and Breese Are Impossible To Combine Due To Voice Sound Data Problems**

In Best's embodiments, the character communicates with the user with pre-recorded "voice sound data" (see above). Breese's application is predicated on spontaneous, unpredictable user input mediated by stochastic probability rules to create a computer-based response. It would be substantially impossible to record enough "voice sound data" files to cover the vast variability of stochastically-generated responses needed by the computer application.

### **Even If Combined, Best And Breese Would Not Meet The Claimed Features**

Even if Best and Breese were combined, they still would not teach any system for creating contextually accurate branching conversations. Best teaches no system whatsoever; all of Best's dialogue must be created manually. Breese's conversation paths rely solely on stochastic probabilities, responding primarily to the most recent user input. So the longer the Breese conversations continue, the less contextual accuracy remains. With Breese, the computer application can not substantially review the previous user input earlier in the conversation to check for contextual accuracy in its responses to the user. In contrast, with the Applicant's embodiments, the system administrator can "look back" and confirm contextual accuracy

throughout the conversation when creating the behavior patterns as well as the situation and character tags which merge into them.

### **Combining Best and Breese Would Destroy Their Intended Functions**

Best's intended function was pre-produced, fixed-path games for entertainment and education. In contrast, Breese's intended function was computer-generated responsiveness to spontaneous, unpredictable user input -- such as used at call centers and customer service units. The two intended functions are entirely different and, if combined, would destroy each other's effectiveness.

### **Best And Breese Are From Different Fields**

Breese's application uses stochastic probabilities to predict an appropriate response to spontaneous user input. Best's application uses fixed-paths to create repeatable, pre-produced events. These two fields of computer science have completely different goals and mechanisms.

### **Rejection In Light Of Best And Breese Accepted; Applicant's Claim Cancelled**

Regarding Claim 14, the last Office Action states that because Breese taught the use of computer networks such as the Internet, a person with ordinary skill in the art could combine this Internet usage with Best's dialogue.

Applicant cancels Claim 14.

### **Rejections In Light Of Best Accepted; Applicant's Claims Cancelled**

Regarding Claims 4, 16, 17 and 19, the last Office Action stated that Best discloses a method for modeling a two-way branching conversation in which the user selects a path from a plurality of choices, and fixed pointers guide the conversation along these user-chosen paths.

Applicant cancels Claims 4, 16, 17 and 19.

### **Rejection In Light Of Best Accepted; Applicant's Claim Cancelled**

Regarding Claim 8, the last Office Action stated that Best discloses a method including character-specific media of the computer-based character wherein the character-specific media includes a set of photographs associated with the computer-based character.

Applicant cancels Claim 8.

### **Conditional Request for Constructive Assistance**

The Applicant has amended the claims of this application so that they are proper, definite and define novel structure which is also unobvious. If, for any reason this application is not believed to be in full condition for allowance, the Applicant respectfully requests the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P § 2173.02 and § 707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

### **CONCLUSION**

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. A check is enclosed for the R.C.E. fee plus the two-month extension fee. The Examiner is invited to telephone the below-signed applicant to discuss this application.

Date:

By:

June 24, 2007

Geoffrey P. Brown

Geoffrey P. Brown  
18545 Azure Road  
Deephaven, Minnesota 55391  
Telephone: 612.269.0977

Name: Geoffrey P. Brown  
Applicant acting pro se

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I hereby certify that this correspondence, and attachments, if any, will be deposited with the United States Postal Service by First Class Mail, postage prepaid, in an envelope addressed to "Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" on the date below.

Date: June 25, 2007

Inventor's Signature: Geoffrey P. Brown